In the Specification:

- Please amend the paragraph starting on page 1, line 13, as follows:

Many conventional methods that are geared to perform cross talk correction within digital image processing schemes commonly employ a single pass method over the entire digital image that inherently does not provide a high degree of accuracy. The cross talk correction often does not converge in a highly accurate manner, given the use of only a single iteration of cross talk correction. Those conventional methods that seek to employ multi-pass cross talk correction commonly employ a frame buffer for intermediate data storage. This manner of performing cross talk correction in a multi-pass technique is radically expensive in terms of memory requirements. That is to say, the entire image needs to be stored as an intermediary to perform a multi-pass technique. For example, a single image can contain over] million bytes of memory for a SXGA image. These processing requirements commonly lead design engineers to generate cross talk correction methods that provide less than full correction. Given the enormous memory requirements, designers are often bound to solutions that do not provide full cross talk correction, at least not to convergence of whatever correction method is employed, within image data processing systems that do not have extremely large hardware budget.

- Please amend the paragraph starting on page 2, line 3, as follows:

In addition to those methods that inherently require enormous memory requirements, other conventional methods have sought to perform cross talk correction in a predetermined sequence. For example, in an RGB (red, green, blue) image, the red or R pixels are corrected first, the green or G pixels are corrected next, and finally the blue or B pixels are corrected. However, some of the deficiencies include significant irregularities and uneven distribution over all of the pixel colors within the image. A large amount of image processing is performed on some of the pixels within the digital image, while little to no image processing is performed on other pixels within the same digital image. These irregularities commonly result in high cost and difficulty in implementation in hardware. The amount of redesigning and debugging required to accommodate all of the various and different digital image types may be enormous. For example, to accommodate one digital image type, the designer must specifically design a method adaptable to that image type. Similarly, to accommodate another digital image type, the designer must specifically design another method adaptable to that image type. There simply lacks the ability to adapt such a conventional method universally to different types of digital images

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- Please amend the paragraph starting on page 2, line 17, as follows:

For a clearer understanding of the problem associated with cross talk, the following illustration is provided showing the diffusion of light from one pixel into its

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neighbors. Cross talk between neighboring pixels in a digital image occurs when a beam of light aimed for a pixel diffuses into its neighboring pixels and corrupts their values. Using the following image pattern for illustration, when light is aimed at pixel **B1**, a majority of the light aimed at the pixel may in fact be captured by the pixel **B1**.

- Please amend the paragraph starting on page 8, line 2, as follows:

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The components in the figures are not necessarily to scale, emphasis instead being placed upon illustrating the principles of the invention. In the figures, ~~likes~~ like reference numerals designate corresponding parts throughout the different views.

- Please amend the paragraph starting on page 11, line 8, as follows:

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The measured coefficients preceding the pixel values on the right hand side (b1m, b2m, ... b9m) represent the measured diffusion coefficients between the adjacent pixels, where b1m=1/b1, b2m=b2/b1, ... b9m=b9/b1. The actual value of the pixel location B1 is unknown, given the imperfection of the image capture device itself (shown as an image sensor circuitry in the various embodiments of the invention following). However, recursive mathematics are employed to approximate the actual values as shown below. The right hand side of the equation (Gl, G5, ...) is unknown, so those values are approximated and replaced with their measured and corrupted values as shown below.

- Please amend the paragraph starting on page 11, line 17, as follows:

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B1p is partially cross talk corrected and is closer to the real value B1 than B1m is to B1. Continuing on, doing the same thing to all pixels in the image then we get a partially corrected image that is closer to the uncorrupted one. Since all the pixels were processed only once, this particular embodiment illustrates single pass cross talk correction. If desired, all of the partially corrected pixel values are stored in a frame buffer, then the cross talk correction is repeated indefinitely until convergence, or a predetermined number of ~~time~~ times, to generate a higher quality Image. However, after ~~several~~ two or more passes the cross talk correction converges and further passes will not improve or modify the image in any visually perceptual manner.

- Please amend the paragraph starting on page 17, line 12, as follows:

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~~This line~~ Line T 356 is presently the raw image data that is read by the image sensor circuitry 350 and probably contains cross talk corruption from adjacent pixels. The processing circuitry 312 feeds a previously read line of raw image data into the line buffer N 319. A previously read and one time cross talk corrected line of image data in this Figure is shown to be fed into the line buffer N-1 318. Similarly, previously read and N times cross talk corrected line of image data in this Figure is shown to be fed into the line buffer A 316. Any variable grid size is employed to perform the correction of cross talk, as will be shown in even greater detail in the following Figures.

- Please amend the paragraph starting on page 17, line 19, as follows:

The multi-pass cross talk correction is employed such that a one time cross talk corrected line is located in the line buffer N-1 318, and an N times cross talk corrected line is located in the line buffer A 316. The multi-pass solution is operable such that when one pixel is cross talk corrected, additional pixels along a predetermined trajectory within the digital image are also operable to be cross talk corrected as well. These additional pixels along the predetermined trajectory are ~~most likely being~~ cross talk corrected a 2nd, 3rd, etc. time, i.e., an Nth time.

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- Please amend the paragraph starting on page 23, line 4, as follows:

In the illustration shown in Fig. 40, position A employs a 2xM grid size to perform cross talk correction, where M is an integer. A single line buffer may be required to perform this operation. The grid size 2xM is an indefinitely scaleable rectangle where the height of the rectangle is 2 lines of image data. Similarly, position C employs a 4xM grid size to perform cross talk correction. Three line buffers may be required to perform this operation. The grid size 4xM is an indefinitely scaleable rectangle where the height of the rectangle is 4 lines of image data. Similarly, position E employs a 6xM grid size to perform cross talk correction. Five line buffers may be required to perform this operation. The grid size 6xM is an indefinitely scaleable rectangle where the height of the rectangle may be 6 lines of image data.

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